

What is claimed is:

1. A part for connecting a fluid line to an opening of a container comprised of thermoplastic material or for closing the opening of the container, the part comprising:

a first component and a second component comprised primarily of thermoplastic material;

wherein the first component has a surface to be connected to the container;

wherein the material of the first component is configured to form with the thermoplastic material of the container a heat fusion joint via the surface by welding but has no sufficient diffusion barrier capability relative to hydrocarbon fuel;

wherein the material of the second component, in comparison to the material of the first component, has a significantly higher diffusion barrier capability, a reduced swelling capability relative hydrocarbon fuel, a higher mechanical strength, even after hydrocarbon fuel exposure, and a higher thermal shape stability;

wherein the material of the first component encloses the second component at least up to an injection location positioned so as to face away from the surface at a distance that is as large as possible or a greatest possible distance;

wherein the material of the second component is injected into the still formable core of the material of the first component via the injection location.

2. The part according to claim 1, wherein the part is a tubular part and has a tubular wall, and wherein the material of the second component fills most of a length of the tubular wall.

3. The part according to claim 2, wherein the material of the second component forms an end section of the tubular wall remote from the surface.

4. The part according to claim 1, wherein the part is a tubular part, wherein the first component comprises an annular member having the surface, wherein the material of the second component extends from the annular part of the first component to an end of the tubular member remote from the surface.

5. The part according to claim 4, wherein the tubular part has a coaxially extending tubular projection projecting into the annular member, wherein between the annular member and the coaxial extending tubular projection an annular

groove is formed, wherein an axial thickness of the annular member and a depth of the annular groove are selected such that the axial thickness, after welding the surface to the container, is significantly reduced by lateral flow of melted material of the annular member but a bottom of the annular groove has still a spacing from the container.

6. The part according to claim 1, further comprising a third component, wherein the second component encloses the third component, wherein the third component increases at least one of the properties of the part selected from the group consisting of strength, diffusion barrier capability, and thermal shape stability.

7. The part according to claim 6, wherein the third component is primarily comprised of one of the materials selected from the groups consisting of EVOH, PA, POM, PEN, PBT, PET, PBN, LCP, PPS, PPA, aliphatic polyketone and fluoro-thermoplastic material.

8. The part according to claim 1, wherein the first component is comprised of polyolefin and is heat-fusible with the thermoplastic material of the container.

9. The part according to claim 8, wherein the

polyolefin is a functionalized polyethylene.

10. The part according to claim 1, wherein the second component comprises at least one of the materials selected from the group consisting of EVOH, PA, POM, PEN, PBT, PET, PBN, LCP, PPS, PPA, PP, aliphatic polyketone and fluoro-thermoplastic material.

11. The part according to claim 1, wherein at least the first component comprises an electrically conducting additive.

12. The part according to claim 1, wherein the part in cross-section is substantially U-shaped or trapezoidal and is configured to close the opening of the container.

13. The part according to claim 16, further comprising at least one additional functional part injection-molded onto the part.

14. A part for connecting a fluid line to an opening of a container comprised of thermoplastic material or for closing the opening of the container, the part comprising:

a first component and a second component comprised primarily of thermoplastic material;

wherein the first component has a surface to be connected to the container;

wherein the material of the first component is configured to form with the thermoplastic material of the container a heat fusion joint via the surface by welding but has no sufficient diffusion barrier capability relative to hydrocarbon fuel;

wherein the material of the second component, in comparison to the material of the first component, has a significantly higher diffusion barrier capability, a reduced swelling capability relative hydrocarbon fuel, a higher mechanical strength, even after hydrocarbon fuel exposure, and a higher thermal shape stability;

wherein the material of the second component encloses the first component at least up to an injection location positioned so as to face away from the surface at a distance that is as large as possible or a greatest possible distance;

wherein the material of the first component is injected through the still formable core of the material of the second component via the injection location to form the surface.

15. The part according to claim 14, wherein the part is a tubular part and has a tubular wall, and wherein the material of the first component fills most of a length of the tubular wall.

16. The part according to claim 15, wherein the material of the first component is injected into an end section of the tubular wall remote from the surface.

17. The part according to claim 14, wherein the part is a tubular part, wherein the first component comprises an annular member having the surface, wherein the material of the first component extends from the annular part of the first component to an end of the tubular part remote from the surface.

18. The part according to claim 17, wherein the tubular part has a coaxially extending tubular projection projecting into the annular member, wherein between the annular member and the coaxial extending tubular projection an annular groove is formed, wherein an axial thickness of the annular member and a depth of the annular groove are selected such that the axial thickness, after welding the surface to the container, is significantly reduced by lateral flow of melted

material of the annular member but a bottom of the annular groove has still a spacing from the container.

19. The part according to claim 14, further comprising a third component, wherein the first component encloses the third component, wherein the third component increases at least one of the properties of the part selected from the group consisting of strength, diffusion barrier capability, and thermal shape stability.

20. The part according to claim 19, wherein the third component is primarily comprised of one of the materials selected from the groups consisting of EVOH, PA, POM, PEN, PBT, PET, PBN, LCP, PPS, PPA, aliphatic polyketone and fluoro-thermoplastic material.

21. The part according to claim 14, wherein the first component is comprised of polyolefin and is heat-fusible with the thermoplastic material of the container.

22. The part according to claim 21, wherein the polyolefin is a functionalized polyethylene.

23. The part according to claim 14, wherein the second component comprises at least one of the materials selected from the group consisting of EVOH, PA, POM, PEN, PBT, PET, PBN, LCP, PPS, PPA, PP, aliphatic polyketone and fluoro-thermoplastic material.

24. The part according to claim 14, wherein at least the second component comprises an electrically conducting additive.

25. The part according to claim 14, wherein the part in cross-section is substantially U-shaped or trapezoidal and is configured to close the opening of the container.

26. The part according to claim 25, further comprising at least one additional functional part injection-molded onto the part.